Server:

In handle client there needs to be:

* Server reaction to incoming message
  + E.g. Player typed a letter, player quit, player successfully connected.

Client:

Needs:

* Easy way to send certain messages to the server
* Send certain updates to the server
  + E.g. typed letter, quit or successfully connected

At any point the user doesn’t need information based off of previous information, then the connection will be closed. I will also try to find a way to close the connection when the user uses alt+f4 to close the game. This could be a time such as the user being in the main menu, or the use being on the login screen. Will also have a Boolean of “isConnected” to prevent a crash when alt + f4 is used so that a connection that doesn’t exist doesn’t get closed. The connection will remain open when the game is being played however.

According to the objectives previously listed, the client and server will need to:

* Establish a connection with the server
* Accept a connection from a client
* Let the player make a new account or login
  + New account:
    - Send requested name and password
    - Check database for duplicates
      * If duplicate send message back that username is unavailable
      * Otherwise add to the database and send confirmation to the user
  + Login:
    - Send username and password
      * Check if username and password match
        + If so the client will be sent a message and told to keep that username and password to use for future requests
        + Else send message for client to try again
      * Update latest time logged in
* The user should be shown the main menu
  + Play button
    - Send a message to the server to request to join the queue
    - Player should be put in a queue
      * Message sent to client about the player being in the queue
    - When the game is found the client should be sent a message that the game has been found
    - The message will be sent to both players about the phrase being typed
    - The players will be sent a time in UNIX time that the game will start which will be a few seconds in the future, this is to make sure they both start at the same time
  + Leaderboards button
    - Client sends request for leaderboards (don’t need username and password)
    - Server sends back the information
    - Client displays the information
  + Options
    - Client will allow changing of sound volume, text size and text colour
  + Statistics button
    - Client will send request for player statistics along with username and password
    - Server will check username and password and send user statistics
      * WPM
      * Games played
      * Games won
      * Longest win streak
      * Highest ELo
      * Largest win margin
  + Exit button